UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,545	01/31/2001	Leslie M. Brooks	2479.1078-000	3228

21005 7590 01/09/2006

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

EXAMINER	
PHILLIPS, HASSAN A	

ART UNIT	PAPER NUMBER
2151	

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/774,545	BROOKS ET AL.	
	Examiner	Art Unit	
	Hassan Phillips	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to communications filed on October 24, 2005.

Response to Arguments

2. Applicant's arguments filed October 24, 2005 have been fully considered but they are not persuasive. Applicant argued that:

a) Gillon does not suggest disabling the compression process or providing a mechanism that can disable the compression process; and,

b) There is no suggestion to combine Gillon with Christensen.

Examiner respectfully disagrees with Applicant's assertions.

3. Regarding item a), Examiner submits the teachings of Gillon clearly suggest disabling the compression, at the least, when reading in light of Applicant's specification.

Page 3, lines 1-6 of Applicant's specification recites:

> "By ***monitoring the data type of data streams***, an Internet router, for example, employing the principles of the present invention, ***can make intelligent guesses as to which data streams are compressible. As a result of such a guess, the Internet router can enable and disable a compression process, thereby compressing different streams of data in an adaptive manner.*** By adaptively enabling compression, the associated dictionary maintains data patterns that keep the compression process efficient."

Similar teachings for employing enabling or disabling are found throughout Applicant's specification, (i.e. page 7, lines 11-17).

Similar to Applicant's claimed invention, Gillon also teaches monitoring the data type of data streams, making an intelligent guess as to which data streams are compressible, and as a result of the guess, deciding whether or not to compress the stream of data (col. 2, lines 21-31, col. 5, lines 48-57). Thus, Examiner maintains that in light of Applicant's specification, in the teachings of Gillon, the decision to compress the stream of data, or to not compress the steam of data, is a clear suggestion of enabling or disabling the compression as claimed by the Applicant.

4. Regarding item b), the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Not only does Gillon suggest teachings of Applicant's claimed invention for reasons previously mentioned, Christensen discloses Applicant's claimed "selectively controlling the state of a compression algorithm" was knowledge generally available to one or ordinary skill in the art at the time of the present invention, (Christensen, col. 2, lines 1-18).

5. Accordingly the references supplied by the examiner in the previous office action covers the claimed limitations. The rejections are thus sustained. Applicant is requested to review the prior art of record for further consideration.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-31, are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillon in view of Christensen.

8. In considering claims 1, 13, 25, and 28, Gillon discloses a computer-readable medium, an apparatus, and a method for compressing a data stream comprising: filtering protocol-specific header and control information of a protocol data unit (PDU) to determine compressibility of the contents of the PDU, (col. 5, lines 48-50); based on the result of filtering, selecting a state of data link compression for the PDU to optimize compression efficiency, (col. 5, lines 52-56); and associating the selected state of data link compression with the protocol data unit to enable a compression process adapted to compress protocol data units in an adaptive manner, (col. 2, lines 21-31).

Although the teachings of Gillon show substantial features of the claimed invention, they fail to expressly show: disabling a compression process.

Nevertheless, it was well known in the art at the time of the present invention that having the ability to enable a compression process to optimize compression efficiency also suggests having the ability to disable a compression process to optimize compression efficiency. This is better exemplified in the teachings of Christensen. More specifically, Christen teaches: enabling or disabling a compression process adapted to compress protocol data units in an adaptive manner for optimizing compression efficiency, (col. 2, lines 1-18).

Thus, if not implicit in the teachings of Gillon, given the teachings of Christensen it would have been obvious to one of ordinary skill in the art to modify the teachings of Gillon to show disabling the compression process. This would have clearly demonstrated advantages for efficiently utilizing a compression algorithm only when needed, Christensen, col. 2, lines 12-18.

9. In considering claims 2, 14, and 26, the method of Gillon teaches compressing the contents of the PDU as a function of the state of data link compression. See col. 5, lines 52-56.

10. In considering claims 3 and 15, although the disclosed method of Gillon shows substantial features of the claimed invention, it fails to expressly disclose: indicating whether the contents of the PDU have been compressed or not.

Nevertheless, in a similar field of endeavor Christensen teaches a method for adaptive compression comprising: applying an indication in a compressed PDU to indicate whether the contents of the PDU have been compressed, (col. 5, lines 54-61).

Given the teachings of Christensen, it would have been obvious to one of ordinary skill in the art to modify the teachings of Gillon to also teach a means of indicating whether contents of a compressed PDU have been compressed by applying an indication in, or with, the compressed PDU. This would have provided an efficient means for the device assigned to decompress the PDU to determine whether decompression is necessary or not, Christensen, col. 5, lines 49-53.

11. In considering claims 4, 16, and 27, Gillon further discloses decompressing the compressed contents of the PDU, col. 5, lines 13-17.

12. In considering claims 5 and 17, the combined methods taught by Gillon and Christensen with respect to claims 3, 4, 15, and 16, provide a means for decompressing the compressed contents of a PDU in a pre-negotiated manner based on the indication of whether the contents of the PDU have been compressed.

13. In considering claims 6 and 18, it is implicit in the method taught by Gillon that a table is accessed having entries with specific media types deemed compression limited. See col. 5, lines 39-50.

14. In considering claims 7 and 19, it is also implicit in the method taught by Gillon that filtering includes associating individual PDU's to specific media types. See col. 5, lines 48-56.

15. In considering claims 8 and 20, the method of Gillon teaches determining if a given PDU is associated with a previously filtered PDU, and, if so, assigning the same state of data link compression for the given PDU as for the previously filtered PDU. See col. 5, lines 48-57.

16. In considering claims 9 and 21, it is implicit in the method taught by Gillon that a table is accessed including information of previously filtered PDU's, when determining if a given PDU is associated with a previously filtered PDU. See col. 5, lines 48-56.

17. In considering claims 10 and 22, it is also implicit in the method taught by Gillon that data link compression is disabled if the compressibility of the contents of the PDU is determined to be low. See col. 5, lines 48-56.

18. In considering claims 11 and 23, the method of Gillon teaches enabling data link compression if the compressibility of the contents of the PDU is determined to be high. See col. 5, lines 48-56.

19. In considering claims 12 and 24, the method of Gillon further teaches utilizing tables initialized with patterns expected to be contained in the content of the PDU, and used by the data link compression. See col. 5, lines 33-38.

20. In considering claim 29, Gillon discloses a method for optimizing compression efficiency comprising: filtering protocol-specific header and control information of a protocol data unit (PDU) to determine compressibility of the contents of the PDU, (col. 5, lines 48-50); based on the result of filtering, selecting a state of data link compression for the PDU to optimize compression efficiency, (col. 5, lines 52-56).

Although the teachings of Gillon show substantial features of the claimed invention, they fail to show: selectively controlling a state of a compression algorithm.

Nevertheless, Christensen teaches: without changes to a subordinate protocol layer, or changes to higher protocol layers that the subordinate protocol layer carries, selectively controlling the state of a compression algorithm for compressing data transported by PDU'S across a connection in a data communication network to optimize the compression efficiency, (col. 2, lines 1-18).

Thus, given the teachings of Christensen, it would have been obvious to one of ordinary skill in the art to modify the teachings of Gillon to show, without changes to a subordinate protocol layer or changes to the higher protocol layers it carries, selectively controlling the state of a compression algorithm based on a protocol-specific header and control information of a protocol data unit to determine compressibility for compressing data transported by protocol data units across a connection in the data

communication network to optimize the compression efficiency. This would have advantageously provided an efficient means for using a compression algorithm only when needed, Christensen, col. 2, lines 12-18.

21. In considering claim 30, the method of Christensen discloses selectively controlling the state of the compression algorithm by enabling or disabling the compression algorithm. See col. 2, lines 1-12. One of ordinary skill in the art would modify Gillon with Christensen for the same reasons indicated in consideration of claim 29.

22. In considering claim 31, Gillon teaches controlling the state of compression by analyzing protocol-specific header and control information of the PDU'S of the higher protocol layers. See col. 5, lines 39-50.

Conclusion

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hassan Phillips whose telephone number is (571) 272-3940. The examiner can normally be reached on M-F 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571) 272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HP/
12/29/05

ZARNI MAUNG
SUPERVISORY PATENT EXAMINER